

AMENDMENTS TO THE DRAWINGS

The attached sheet(s) of drawings includes changes to:

Figure 1 has been amended to include a label "Background Art" in view of the Office Action. A marked-up copy and formal drawing for Figure 1 is enclosed.

Attachment: Replacement sheet
 Annotated sheet showing changes

REMARKS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-8 are pending in the present application. Claims 1-3 have been amended and claims 4-8 have been added by the present amendment. Claims 1 and 5 are independent.

In the last Office Action, the drawings and specification were objected to; and claims 1-3 were rejected to 35 U.S.C. § 103(a) as unpatentable over Applicant's admitted prior art (AAPA) in view of Matsumoto et al.

Figure 1 has been labeled "Background Art" to distinguish Applicant's invention from that which is not Applicant's invention according to MPEP § 608.02(g). Accordingly, it is respectfully requested the objection to the drawings be withdrawn.

Further, enclosed is a substitute Specification correcting minor informalities and addressing the objection to the specification. No new matter has been added. A marked-up copy and clean copy of the Substitute Specification are enclosed. Accordingly, it is respectfully requested the objection to the specification be withdrawn.

Claims 1-3 stand rejected under 35 U.S.C. 103(a) as unpatentable over Applicant's disclosed Figure 1¹ in view of Matsumoto et al. This rejection is respectfully traversed.

Amended independent claim 1 is directed to a method for manufacturing a light-emitting device with compound semiconductor. The method includes forming an n-semiconductor layer, an activated layer, and a p-semiconductor layer, in order, on top of a double substrate, making at least a part of the n-semiconductor layer exposed by a mesa-cut in a vertical direction from the p-semiconductor layer to a part of the n-semiconductor layer, forming a transparent electrode for extending an electric current on the top of the p-semiconductor layer and activating the p-semiconductor layer

¹ Applicants made no admission that Figure 1 qualifies as statutory prior art usable in a claim rejection. However, for the sake of the argument, Applicant provides remarks.

using an oxygen plasma, and forming an n-pad electrode and a p-pad electrode on the top of the transparent electrode for extending an electric current.

Thus, because the p-type semiconductor layer is activated using an oxygen plasma it is possible to conduct a heat treatment process at a lower temperature compared to the conventional thermal temperature of 600 °C, which increases the durability and efficiency of the light-emitting element (see paragraphs [0034] and [0026] in the present application, for example).

The Office Action relies on Matsumoto et al. as teaching the activation of a p-type semiconductor layer using an oxygen plasma. However, it is respectfully noted Matusmoto et al. merely teach forming an oxide layer 13 (see Figure 2B) on a p-type layer using an oxygen plasma. Note the p-type layer 12 is not activated using the oxygen plasma, but rather only the oxide film 13 is formed. This is particularly evidenced by paragraph [0033] of Matsumoto et al., which describes that the nitride semiconductor layers are treated in the atmosphere containing active oxygen to form the oxide film thereon before the activating treatment (of the p-type layer 12). Applicant's disclosed Figure 1 also does not teach or suggest the features recited in independent claim 1.

Accordingly, it is respectfully submitted independent claim 1 and each of the claims depending therefrom are allowable.

In addition, new claims 4-8 have been added to set forth the invention in a varying scope, and Applicant respectfully submits the new claims are supported the originally-filed application. For example, dependent claim 4 recites that the transparent electrode is directly formed on the p- semiconductor layer facing the transparent electrode. These features are supported by Figure 2c, for example. In addition, new claims 5-8 are similar to claims 1-4, but are directed to a light-emitting device. It is respectfully submitted new claims 5-8 are allowable for similar reasons as discussed above.

Further, the Abstract has been amended to be a single paragraph and to conform with U.S. patent practice.

In view of the above amendment, applicant believes the pending application is in condition for allowance. In view of the above remarks, it is believed that the claims

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clearly distinguish over the patents relied on by the Examiner, either alone or in combination.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (703) 205-8000 in the Washington, D.C. area.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

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Respectfully submitted,

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